# Ballast Water Management

## Preventing and Controlling the Spread of Aquatic Nuisance Species

A request for vessel operators to follow the U.S. Coast Guard mandatory requirements and the voluntary guidelines for ballast water management in waters of the U.S. under 33 CFR 151 Subpart D

**AQUATIC NUISANCE SPECIES**

The water bodies of the world are being invaded by non-native aquatic species, also known as aquatic nuisance species. The biological invaders are arriving in ship's ballast water and sediment and are being discharged by unsuspecting mariners to siege native aquatic environments. The problem is that successful invaders usually have detrimental effects on native species, their habitats and human activities dependent on water resources. Once nuisance species establish themselves, eradication becomes impossible without further damaging the environment.

**BALLAST WATER-A SOURCE OF INVASION**

Biological invasion can occur when ships discharge ballast water in foreign ports or nearshore waters. If the aquatic plant and animal species introduced by ballast water and sediment are compatible with the physical and ecological conditions of the waterbody, they may survive, reproduce and disperse throughout the environment. The large amounts of ballast water carried by ships, their increasing speeds of transit between ports and the improving water quality worldwide all contribute to the success of the invasion process.

## SUCCESSFUL INVADERS

Not all aquatic species transported by ballast water and introduced to new environments will be successful invaders, in fact, most fail. The ones that succeed display common characteristics that make them successful. They are *hardy*; capable of surviving the voyage in ballast water. They are *aggressive*; capable of displacing native species. They are prolific *breeders*; capable of expanding their populations rapidly. And they *disperse rapidly*; capable of affecting new environments.

## THE EFFECTS OF INVASION

Successful nuisance species have the infamous ability to *spoil* native habitat, *threaten* native plant and animal species' diversity and abundance, and disrupt human social and economic activities dependent on aquatic resources. These impacts are more likely to be felt in areas where nuisance species have no natural predators or competition, or in areas where there are few native species to compete with or resist its invasion

## INVASION MYTH

It is important to note that despite the release of ballast water and sediments in waters of the U.S. for decades, many new species could still invade. The argument that ballast has already provided the opportunity for most or all species from donor areas to invade is contradicted by the continuing flow of new invasions, such as the ruffe and zebra mussel in the Great Lakes.

## BALLAST WATER MANAGEMENT

Nearshore and port environments where ships usually take on ballast water support a higher diversity and number of species than open ocean. Most open ocean species are unique to high seas and generally do not and cannot live in the near shore environment. Exchanging near shore ballast in mid-ocean replaces the diverse, abundant, and highly adaptable organisms with fewer and less diverse open ocean organisms intolerant of freshwater. The risk of discharging this exchanged ballast water into coastal and inland water is considered acceptable. The ballast exchange concept was chosen by resource managers, regulatory agencies and the shipping industry because it provides an economical and efficient means of reducing the risk of invasion. The International Maritime Organization (IMO) has determined that ballast exchange is the most effective method now available to control the spread of aquatic nuisance species. The U.S. Coast Guard has promulgated mandatory requirements and voluntary guidelines to be used by vessel operators to control the spread of aquatic nuisance species.

## FREQUENTLY ASKED QUESTIONS

*How do I know if I should follow ballast water management regulations?*
Any vessel equipped with ballast water tanks that enters waters of the U.S. from outside the Exclusive Economic Zone (EEZ) must follow the ballast water regulations.

*What are the voluntary precautionary measures I can take to minimize the uptake and the release of harmful aquatic organisms, pathogens, and sediments?*

1. Avoid the discharge or uptake of ballast water in areas within or that may directly affect marine sanctuaries, marine preserves, marine parks, or coral reefs.

2. Minimize or avoid uptake of ballast water in the following areas and situations:

    a. Areas known to have infestations or populations of harmful organisms and pathogens (e.g. toxic algal blooms)

    b. Areas near sewage outfalls.

    c. Areas near dredging operations.

    d. Areas where tidal flushing is known be poor or times when a tidal stream is known to be more turbid.

    e. In darkness when bottom-dwelling organisms may rise up in the water column.

    f. Where propellers may stir up sediment.

3. Clean ballast tanks in mid-ocean or under controlled arrangements in port, or at dry dock. Dispose of your sediments in accordance with local, State, and Federal regulations.

4. Discharge only the minimal amount of ballast water essential for operations while in waters of the United States.

5. Rinse anchors and anchor chains when retrieving to remove organisms and sediments at their place of origin.

6. Remove fouling organisms from hull, piping, and tanks on a regular basis and dispose of any removed substances in accordance with local, State, and Federal regulations.

7. Maintain a ballast water management plan that was developed specifically for the vessel.

8. Train the master, operator, person-in-charge, and crew, on the application of ballast water and sediment management and treatment procedures.

*How do I manage ballast water under the voluntary guidelines?*
There are five solutions for effectively managing ballast water:

1. Carry out an exchange of ballast water in open waters beyond the EEZ within an area no closer than 200 miles from any shore in a depth exceeding 2000 meters, prior to entry into waters of the U.S.

2. Retain the ballast water onboard.

*How do I manage ballast water under the voluntary guidelines (cont'd)?*

3. Use an alternative method of ballast water management that has been submitted to and approved by the Commandant prior to the vessels voyage. Requests for approval of alternative ballast water management methods must be submitted to the Commandant (G-M), U.S. Coast Guard Headquarters, 2100 Second Street SW., Washington, DC 20593. Contact phone number (202) 267-0500

4. Discharge ballast water to an approved reception facility.

5. Under extraordinary conditions, conduct a ballast water exchange within an area agreed to by the Captain of the Port (COTP) at the time of the request, or after notification to the COTP within an area listed as an Alternate Exchange Zone.

*What do I do with sediment from ballast tanks under the mandatory guidelines?*
Any sediment from ballast tanks must be discharged ashore at a proper reception facility.

*What records should I keep under the mandatory requirements?*
Masters of all vessels carrying ballast water into the waters of the U.S. after operating beyond the EEZ, unless specifically exempted, shall keep records including the following for at least two years:

- Vessel's name, type, IMO number, owner,gross tonnage, call sign, flag, agent, date of arrival, port of arrival, last port, and country of call, and next port and country of call.
- The total amount of ballast water being carried, and total ballast water capacity.
- Whether or not there is a ballast water management plan onboard and in use on the vessel, the total number of ballast tanks onboard, total number of tanks and holds in ballast, total number of tanks and holds that were exchanged, and the total number of tanks and holds that were not exchanged.
- The origin date(s) of uptake, location (s), volumes(s), and temperature(s) of any ballast water (taken on prior to an exchange if exchange conducted).
- The date(s), location(s), volume(s) thoroughness (percentage exchanged) of any ballast water exchanged, and the combined sea height (sea plus swell) in meters (m) at the time of the ballast water exchange.
- The proposed date, location, volume, and salinity of any ballast water to be discharged into territorial waters of the U.S.
- The location for disposal of sediment carried upon entry into the territorial waters of the U.S., if sediment is to be discharged.
- If a vessel normally conducts a ballast water exchange but did not do so under the provisions of 33 CFR 151.2015 state action taken. If ballast water was not exchanged, state other control action(s) taken such as retain onboard; alternate method of compliance, etc. If no control action taken state reason why.
- Is a copy of the IMO voluntary ballast water management guidelines onboard?
- The master, owner, operator's or responsible officer's printed name, title, and signature attesting to the accuracy of the information provided and certifying compliance with the requirements
- Whether or not this is an amendment to information previously submitted for this voyage.

*What information am I required to submit under the mandatory reporting requirements?*
Masters of all vessels carrying ballast water into waters of the U.S. after operating beyond the EEZ, unless specifically exempted, must provide the information outlined above in written form to the Commandant, U.S. Coast Guard as follows:

- The master of a vessel of a U.S. or Canadian flagged vessel bound for the Great Lakes must telefax the required information to the COTP Buffalo (315) 764 –3283 at least 24 hours prior to the vessel's arrival in Montreal, Quebec.

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*What information am I required to submit under the mandatory reporting requirements (cont'd)?*

- The master of a foreign flagged vessel bound for the Great Lakes must:
  Telefax required information to the COTP Buffalo (315) 764-3282 at least 24 hours prior to the vessel's arrival in Montreal, Quebec; or
  Complete the ballast water information section of the St. Lawrence Seaway required Pre-entry Information From Foreign Flagged Vessels and submit it in accordance with the applicable Seaway notice.
- The master of a vessel bound for the Hudson River north of the George Washington Bridge must telefax the information to the COTP New York at (718) 354-4249 before the vessel enters the waters of the U.S. (12 miles from the baseline).
- The master of all other vessels subject to this regulation must telefax the information to the Commandant, U.S. Coast Guard at (301) 262-4319, transmit it electronically to the National Ballast Water Clearinghouse (NBIC) at www.serc.si.edu\invasions\ballast.htm, or mail it to the U.S. Coast Guard, c/o Smithsonian, P.O. Box 28, Edgewater, MD 21037-0028, before departing the first port of call in the United States.
- If the information submitted varies after it is submitted, an amendment must be submitted using the same procedures prior to vessel departure from waters of the U.S.

## FOR FURTHER INFORMATION

For reporting forms, instructions, a complete set of the regulations, and additional education materials, please contact:

Commandant (G-MSO-4)
U.S. Coast Guard
2100 2nd Street, SW
Washington, DC 20593-0001
(202)-267-0500